



TITLE V OPERATING PERMIT

Issued pursuant to Title 22a of the Connecticut General Statutes (CGS) and Section 22a-174-33 of the Regulations of Connecticut State Agencies (RCSA) and pursuant to the Code of Federal Regulations (CFR), Title 40, Part 70.

Title V Permit Number	075 - 0246 - TV
Client/ Sequence /Town/Premises Numbers	1046/1/75/505
Date Issued	May 6, 2004
Expiration Date	May 6, 2009

Corporation:

The Metropolitan District

Premises Location:

Hartford Water Pollution Control Facility, 240 Brainard Road, Hartford, CT 06114

Name of Responsible Official and Title:

M. Stephen Rhoades
Chief Executive Officer

All the following attached pages, 2 through 47, are hereby incorporated by reference into this Title V Operating Permit.

ARTHUR J. ROCQUE, JR.
Arthur J. Rocque, Jr.
Commissioner

5/6/04
Date

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LIST OF ACRONYMS

<i>Acronym</i>	<i>Description</i>
AOS	Alternative Operating Scenario
ASC	Actual Stack Concentration
BACT	Best Available Control Technology
BAM	Bureau of Air Management
CAA	Clean Air Act
CFR	Code of Federal Regulations
CGS	Connecticut General Statutes
CO	Carbon Monoxide
°F	Degrees Farenheight
DEP	Department of Environmental Protection
DT/h	Dry Ton per hour
DT/y	Dry Ton per year
EU	Emission Unit
EPA	Environmental Protection Agency
ft ³	Feet Cubed
gal	Gallon
GC/MS	Gas Chromatography/Mass Spectroscopy
GEU	Grouped Emission Unit
gm./bk. hp-hr	gram per brake horsepower hour
HAP	Hazardous Air Pollutant
HLV	Hazard Limiting Value
hr	Hour
HWPCF	Hartford Water Pollution Control Facility
ITT	Intent to Test
lb	Pound
MASC	Maximum Allowable Stack Concentration
MDC	Metropolitan District
µg/m ³	Micrograms per cubic meter
MM	Million
MMBTU	Million British Thermal Units
min	Minute
NAAQS	National Ambient Air Quality Standards
NO _x	Nitrogen Oxides
NO ₂	Nitrogen Dioxide
NSR	New Source Review
O ₂	Oxygen
PM	Particulate Matter
POTW	Publicly Owned Treatment Works
ppmv	Parts per million, volumetric basis
RCSA	Regulations of Connecticut State Agencies
SIC	Source Identification Code
SN#	Serial Number
SOS	Standard Operating Scenario
SO _x	Sulfur Oxides
SO ₂	Sulfur Dioxide
THC	Total Hydrocarbons
TPY	Tons per year
TSP	Total Suspended Particulate
VOC	Volatile Organic Compound

Title V Operating Permit

All conditions in Sections III, IV, VI and VII of this permit are enforceable by both the Administrator and the Commissioner unless otherwise specified. Applicable requirements and compliance demonstration are set forth in Section III of this permit. The Administrator or any citizen of the United States may bring an action to enforce all permit terms or conditions or requirements contained in Sections III, IV, VI and VII of this permit in accordance with the Clean Air Act (CAA), as amended.

Section I: Premises Information/Description

A. PREMISES INFORMATION

Nature of Business: Publicly Owned Treatment Works (POTW) with sewage sludge incinerators

Primary SIC: 4952

Facility Mailing Address: P.O. Box 800, Hartford, CT 06142-0800

Telephone Number: 860-278-7850

B. PREMISES DESCRIPTION

The Metropolitan District (MDC) owns and operates the Hartford Water Pollution Control Facility (HWPCF), a municipal wastewater treatment facility. The facility has three Nichols-Herreshoff multiple hearth sludge incinerators (EU-001-003), seven diesel powered engines (GEU-002, EU-009 and EU-010). The facility also houses settling tanks, aeration tanks, thickening tanks, holding tanks, three centrifuges, natural gas boilers and several emergency engines/generators. On April 15, 1997, the DEP issued two consent orders to MDC, Consent Order Nos. 1470 and 1498. On June 19, 2003, Consent Order No. 1498 was closed out and there are no pending requirements.

Consent Order No. 1470 required MDC to: cease operation of the Compost Facility except for the purpose of achieving full production and stack testing, submit a complete application for a permit (including a BACT review) for two incinerators and submit a report indicating if the third incinerator will be upgraded, decommissioned, or restricted to emergency use only. Also MDC had to complete a Supplemental Environmental Project. The Compost Facility was destroyed in a fire in December 1999. The Compost Facility's permit (Permit No. 075-0091) was revoked on February 3, 2003. Incinerator Nos. 1 and 2 (GEU-001) are operating under revised NSR permits, which were issued on April 9, 2001. Incinerator No. 3 is operating under its original permit issued on March 31, 1983.

Section II: Emissions Units Information

A. EMISSIONS UNITS DESCRIPTION

Emissions units are set forth in Table II.A

TABLE II.A: EMISSIONS UNITS DESCRIPTION					
Grouped Emission Units	Emissions Units	MDC Emissions Units	Emissions Unit Description	Control Unit Description	Permit Number
GEU-001	EU-001	EU-001	Nichols-Herreshoff Multiple Hearth Sludge Incinerator, No. 1, SN# 47174	Venturi Pak Scrubber and zero hearth afterburner	P-075-0006
	EU-002	EU-002	Nichols-Herreshoff Multiple Hearth Sludge Incinerator, No. 2, SN# 47173	Venturi Pak Scrubber and zero hearth afterburner	P-075-0007
	EU-003	EU-003	Nichols-Herreshoff Multiple Hearth Sludge Incinerator, No.3, SN# 47175	Tray scrubber and zero hearth afterburner	P-075-0008
GEU-002	EU-004	EU-007	Final Effluent Pump No. 1 – Caterpillar Model 3406C Diesel Industrial Engine Arrangement No. 109-1349 SN# 6TB 13435	Not Applicable	P-075-0213
	EU-005	EU-008	Final Effluent Pump No. 2 – Caterpillar Model 3406C Diesel Industrial Engine Arrangement No. 109-1349 SN# 6TB 13436	Not Applicable	P-075-0214
	EU-006	EU-009	Final Effluent Pump No. 3 – Caterpillar Model 3406C Diesel Industrial Engine Arrangement No. 109-1349 SN# 6TB 13356	Not Applicable	P-075-0215
	EU-007	EU-010	Final Effluent Pump No. 4 – Caterpillar Model 3406C Diesel Industrial Engine Arrangement No. 109-1349 SN# 6TB 13318	Not Applicable	P-075-0216

Section II: Emissions Units Information

TABLE II.A: EMISSIONS UNITS DESCRIPTION, continued					
Grouped Emission Units	Emissions Units	MDC Emissions Units	Emissions Unit Description	Control Unit Description	Permit Number
GEU-002, continued	EU-008	EU-011	Final Effluent Pump No. 5 – Caterpillar Model 3406C Diesel Industrial Engine Arrangement No. 109-1349 SN# 6TB 13317	Not Applicable	P-075-0217
	EU-009	EU-012	Emergency Generator at Wet Weather Pump Station – Caterpillar Model 3412 Diesel Engine Generator Set, SN# 6EJ00526	Not Applicable	P-075-0212
	EU-010	EU-016	Caterpillar XQ350 Generator Set, SN# 4JK00628	Not Applicable	P-075-0343

(*) It is not intended to incorporate by reference these NSR Permits, Orders, or Registrations into this Title V Operating Permit.

Section II: Emissions Units Information

B. OPERATING SCENARIO IDENTIFICATION

The Permittee shall be allowed to operate under the following standard operating scenario (SOS) without notifying the Commissioner, provided that such operations are explicitly provided for and described in the table below. The Permittee shall record contemporaneously, the operating scenario under which each emissions unit is operating in a log to be kept at the subject premises. There are no Alternate Operating Scenarios (AOS) for the premises.

TABLE II.B: OPERATING SCENARIO IDENTIFICATION		
Identification of Operating Scenarios	Emissions Units Associated with the Scenarios	Description of Scenarios
SOS	GEU-001 and EU-003	The Permittee operates three Nichols-Herreshoff Multiple hearth sludge incinerators by using sewage sludge as the primary fuel and natural gas or propane as auxiliary fuel.
	GEU-002, EU-009, and EU-010	The Permittee operates seven diesel generators/pumps.

Section III: Applicable Requirements and Compliance Demonstration

The following tables contain summaries of applicable regulations and compliance demonstration for each identified Emissions Unit and Operating Scenario, regulated by this Title V Operating Permit. Note: All conditions set forth in Section III of this Title V Operating Permit are federally enforceable.

A. GEU-001 (Nichols-Herreshoff Multiple Hearth Sludge Incinerator Nos. 1 & 2)

Table III.A: GEU-001 (EU-001 and EU-002)			
Pollutants or Process Parameters	Limitations or Restrictions	Applicable Regulatory References/Citations	Compliance Demonstration Requirements
Allowable Primary Fuels	Only sewage sludge may be fired in this unit. Any substance which is considered “municipal-type solid waste,” as defined in 40 CFR, Part 60, §60.51a, or “hazardous waste,” as defined in §22a-115 of the Connecticut General Statutes, is prohibited from being introduced to this unit. For the purposes of this permit, sewage sludge is defined as any solid, semi-solid or liquid residue from the pretreatment or primary, secondary or advanced treatment of domestic sewage, industrial wastewater, septage, portable toilet pumpings and grease traps.	Permit Nos. 075-0006 and 075-0007	A.1
Maximum Hourly Sludge Charging Rate	2.5 DT/h based on a 30 day average for each unit	Permit Nos. 075-0006 and 075-0007	A.2
Maximum Annual Sludge Charging Rate	21,060 DT/y based on a 12-month rolling average for each unit	Permit Nos. 075-0006 and 075-0007	A.3
Maximum Auxiliary Fuel Firing Rate	21,300 ft ³ /hr Natural Gas or 21.3 MMBTU/hr Propane for each unit	Permit Nos. 075-0006 and 075-0007	A.4
Maximum Auxiliary Annual Fuel Usage	179.5 MM ft ³ for each unit	Permit Nos. 075-0006 and 075-0007	A.5

Section III: Applicable Requirements and Compliance Demonstration

Table III.A: GEU-001 (EU-001 and EU-002), continued						
Pollutants or Process Parameters	Limitations or Restrictions				Applicable Regulatory References/Citations	Compliance Demonstration Requirements
Operating Combustion Temperature	Operation of the incinerator shall not cause the operating combustion temperature to exceed the performance test combustion temperature by more than 20 % for each unit				40 CFR 503, Subpart E, §503.45(e)	A.6
In-situ Thermal Oxidizer Operating Temperature	1200°F nominal steady-state operating temperature for each unit				Permit Nos. 075-0006 and 075-0007	A.7
VenturiPak Scrubber Gas Flow Pressure Drop	Minimum gas flow pressure drop is 20 inches water for each unit				Permit Nos. 075-0006 and 075-0007	A.8
VenturiPak Scrubber Tray Water Flow Rate	Minimum water flow to each scrubber is 550 gal/min for each unit				Permit Nos. 075-0006 and 075-0007	A.9
Particulate Matter	1.30 lb/ton dry sludge input for each unit 0.4 lb/1E3 lb of flue gas (adjusted to 50% excess air)				Permit Nos. 075-0006, 075-0007, 40 CFR 60, Subpart O, §60.152(a)(1) and RCSA §22a-174-18(d)(2)(B)	A.10
Opacity	<10 % opacity based on a six minute block average for each unit				Permit Nos. 075-0006, 075-0007 and RCSA §22a-174-4(c)(2) and §22a-174-18(b)	A.11
Criteria Pollutants	The following limits are for each unit:				Permit Nos. 075-0006 and 075-0007	A.12
	Pollutant	lb/hr	lb/MM BTU	lb/DT	ppmv @7% O ₂	
	TSP	1.0		0.4		
	SO _x	4.9		1.96		
	NO _x	18.1	0.33	7.24		
	VOC/THC	19.4			50 ¹ (dry)	
	CO	62.2			245 ¹	
¹ Based on a monthly average						

Section III: Applicable Requirements and Compliance Demonstration

Table III.A: GEU-001 (EU-001 and EU-002), continued			
Pollutants or Process Parameters	Limitations or Restrictions	Applicable Regulatory References/Citations	Compliance Demonstration Requirements
HAP	$MASC = \{ (0.885 * HL V) * (X + 1.08 * V^{0.64})^{1.56} \exp[10.33 * (H - 20)^2 * (X + 1.08 * V^{0.64})^{-1.56}] \} / V$ <p>MASC values are calculated based on the 8-hour HL V</p>	RCSA §22a-174-29	A.13
Beryllium	0.022 pounds (10 grams) over a 24-hour period	Permit Nos. 075-0006, 075-0007 and 40 CFR 61, Subpart C, §61.32(a)	A.14
Mercury	7.10 pounds (3,200 grams) over a 24-hour period	Permit Nos. 075-0006, 075-0007 and 40 CFR 61, Subpart E, §61.52(b)	A.15

Compliance Demonstration

A.1. Allowable Primary Fuels: Primary fuels fed to each incinerator shall meet the limitations or restrictions in condition A.1, Table III.A of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

- a. Monitoring and Testing Requirements
The Permittee shall monitor all materials that are fed to each incinerator. [RCSA § 22a-174-4(d)(1) and RCSA §22a-174-33(j)(1)(K)]
- b. Record Keeping Requirements
The Permittee shall record the date of all instances of incinerator feed materials that are not sewage sludge and record a description of the nonconforming materials, the quantity of such materials, and the source thereof. [RCSA §22a-174-4(d)(1)]

A.2. Maximum Hourly Sludge Charging Rate: The maximum hourly sludge charging rate shall not exceed the limit in condition A.2, Table III.A of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

- a. Monitoring and Testing Requirements
 - i. The Permittee shall install, calibrate, maintain and operate a flow measuring device which can be used to determine either the mass or volume of sludge charged to the incinerator. The flow device shall be certified by the manufacturer to have an accuracy of ±5% over the operating range. [Permit Nos. 075-0006, 075-0007 and 40 CFR Part 60, Subpart O, §60.153(a)(1)]
 - ii. The Permittee shall continuously measure and record the mass or volume of sludge charged to each incinerator. [40 CFR Part 60, Subpart O, §60.153 (a)(1)]

Section III: Applicable Requirements and Compliance Demonstration

b. Record Keeping Requirements

- i. The Permittee shall create and retain daily records of the rate of sludge charged to the incinerator. [40 CFR 60, Subpart O, §60.153(c)(3) and 40 CFR 503, Subpart E, §503.47(i)]
- ii. The sludge hourly charging rate shall be based on a 30 day average as determined either by the product of the mass of wet sludge cake fed per unit time to the incinerator times the solids fraction or the product of the volumetric feed (in gallons of total wet feed per hour) times the density of wet feed to the dewatering operation times the solids fraction measured by the daily grab sample. [Permit Nos. 075-0006, 075-0007 and RCSA §22a-174-33(j)(1)(K)(ii)]
- iii. The Permittee shall keep calibration and maintenance records and original instrument recordings for all continuous monitoring instruments and equipment. [Permit Nos. 075-0006, 075-0007]

A.3. Maximum Annual Sludge Charging Rate: The maximum annual sludge charging rate shall not exceed the limits in condition A.3, Table III.A of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

- i. The Permittee shall install, calibrate, maintain and operate a flow measuring device which can be used to determine either the mass or volume of sludge charged to the incinerator. The flow device shall be certified by the manufacturer to have an accuracy of $\pm 5\%$ over the operating range. [Permit Nos. 075-0006, 075-0007 and 40 CFR Part 60, Subpart O, §60.153 (a)(1)]
- ii. The Permittee shall continuously measure and record the mass or volume of sludge charged to each incinerator. [40 CFR Part 60, Subpart O, §60.153 (a)(1)]

b. Record Keeping Requirements

- i. The Permittee shall create and retain monthly records of the rate of sludge charged to the incinerator. [40 CFR 60, Subpart O, §60.153(c)(3)]
- ii. The Permittee shall keep calibration and maintenance records and original instrument recordings for all continuous monitoring instruments and equipment. [Permit Nos. 075-0006 and 075-0007]
- iii. Annual sludge charge rate shall be calculated on a 12 month rolling average basis obtained by adding the current month's charge rate to that of the previous 11 months. These calculations shall be performed monthly. [Permit Nos. 075-0006 and 075-0007]

A.4. Maximum Auxiliary Fuel Firing Rate: The maximum auxiliary fuel firing rate shall not exceed the limits in condition A.4, Table III.A of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

The Permittee shall install, calibrate, maintain and operate a monitoring device for measuring the auxiliary fuel flow to each incinerator. The auxiliary flow measuring device shall be certified by the manufacturer to have an accuracy of $\pm 5\%$ over the operating range. The fuel flow measuring device shall be operated continuously. [Permit Nos. 075-0006, 075-0007 and 40 CFR 60, Subpart O, §60.154(b)(4)]

Section III: Applicable Requirements and Compliance Demonstration

b. Record Keeping Requirements

- i. The Permittee shall keep calibration and maintenance records and original instrument recordings for all continuous monitoring instruments and equipment. [Permit Nos. 075-0006 and 075-0007]
- ii. The Permittee shall create and retain hourly records of the auxiliary fuel flow to each incinerator for each fuel. [40 CFR 60, Subpart O, §60.153(c)(3)]

A.5. Maximum Auxiliary Annual Fuel Usage: The maximum auxiliary annual fuel usage shall not exceed the limits in condition A.5, Table III.A of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

The Permittee shall install, calibrate, maintain and operate a monitoring device for measuring the auxiliary fuel flow to each incinerator. The auxiliary flow measuring device shall be certified by the manufacturer to have an accuracy of $\pm 5\%$ over the operating range. The fuel flow measuring device shall be operated continuously. [Permit Nos. 075-0006, 075-0007 and 40 CFR 60, Subpart O, §60.154(b)(4)]

b. Record Keeping Requirements

- i. The Permittee shall keep calibration and maintenance records and original instrument recordings for all continuous monitoring instruments and equipment. [Permit Nos. 075-0006 and 075-0007]
- ii. The Permittee shall create and retain monthly records of the auxiliary fuel flow to each incinerator for each fuel. [40 CFR 60, Subpart O, §60.153(c)(3)]
- iii. Annual auxiliary fuel consumption shall be calculated on a 12 month rolling average basis obtained by adding the current month's auxiliary fuel consumption to that of the previous 11 months for each fuel. These calculations shall be performed monthly. [Permit Nos. 075-0006 and 075-0007]

A.6. Operating Combustion Temperature: The following are required:

a. Monitoring and Testing Requirements

- i. The Permittee shall install, calibrate, maintain and operate a temperature measuring device in each hearth, including the after burner, and at the outlet of the incinerator. Each temperature device shall be certified by the manufacturer to have an accuracy of $\pm 5\%$ over its operating range. Each temperature measuring device shall be operated continuously. [Permit Nos. 075-0006, 075-0007, 40 CFR 60, Subpart O, §60.153(b)(3), and 40 CFR 503, Subpart E, §503.45(d)]
- ii. Operation of the incinerator shall not cause the operating combustion temperature to exceed the performance test combustion temperature by more than 20 percent. [40 CFR 503, Subpart E, §503.45(e)]

b. Record Keeping Requirements

- i. The Permittee shall keep calibration and maintenance records and original instrument recordings for all continuous monitoring instruments and equipment. [Permit Nos. 075-0006 and 075-0007]

Section III: Applicable Requirements and Compliance Demonstration

- ii. The Permittee shall create and retain daily records of the measured temperatures of the incinerator. [40 CFR 60, Subpart O, §60.153(c)(3) and 40 CFR 503, Subpart E, §503.47(f)]
- iii. The Permittee shall create and retain a calibration and maintenance log for the instruments used to measure the total hydrocarbons concentration and oxygen concentration in the exit gas from the sewage sludge incinerator stack, the information needed to determine moisture content in the exit gas, and the combustion temperatures. [40 CFR 503, Subpart E, §503.47(n)]

A.7. In-situ Thermal Oxidizer Operating Temperature: The In-situ thermal oxidizer operating temperature shall not exceed the limit in condition A.7, Table III.A of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

The Permittee shall install, calibrate, maintain and operate a temperature measuring device in each hearth, including the after burner, and at the outlet of the incinerator. Each temperature device shall be certified by the manufacturer to have an accuracy of $\pm 5\%$ over its operating range. Each temperature measuring device shall be operated continuously. [Permit Nos. 075-0006, 075-0007, 40 CFR 60, Subpart O, §60.153(b)(3), and 40 CFR 503, Subpart E, §503.45(d)]

b. Record Keeping Requirements

- i. The Permittee shall keep calibration and maintenance records and original instrument recordings for all continuous monitoring instruments and equipment. [Permit Nos. 075-0006 and 075-0007]
- ii. The Permittee shall create and retain daily records of the measured temperatures of the incinerator. [40 CFR 60, Subpart O, §60.153(c)(3) and 40 CFR 503, Subpart E, §503.47(f)]

A.8 VenturiPak Scrubber Gas Flow Pressure Drop: The VenturiPak scrubber gas flow pressure drop shall not decrease below the limit in condition A.8, Table III.A of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

The Permittee shall install, calibrate, maintain and operate a monitoring device that continuously measures and records the VenturiPak scrubber gas flow pressure drop. This device shall be certified by the manufacturer to be accurate within 1 inch of water gauge and shall be calibrated on an annual basis in accordance with the manufacturer's instructions. [Permit Nos. 075-0006, 075-0007 and 40 CFR 60, Subpart O, §60.153(b)(1)]

b. Record Keeping Requirements

- i. The Permittee shall keep calibration and maintenance records and original instrument recordings for all continuous monitoring instruments and equipment. [Permit Nos. 075-0006 and 075-0007]
- ii. The Permittee shall create and retain daily records of the measured pressure drop of the gas flow through the wet scrubbing device. [40 CFR 60, Subpart O, §60.153(c)(1)]

Section III: Applicable Requirements and Compliance Demonstration

c. Reporting Requirements

- i. The Permittee shall submit a written report to the Bureau and to EPA Region I for each semi-annual period ending June 30 and December 31 of each year, containing a record of the average scrubber pressure drop measurements for each period of 15 minutes duration or more during which the pressure drop of the scrubber was less than 30% from the average pressure drop measured during the most recent performance test. [Permit Nos. 075-0006, 075-0007 and 40 CFR 60, Subpart O, §60.155(a)(1)]
- ii. The Permittee shall submit a written report for each calendar day that a decrease in scrubber pressure drop or increase in oxygen content of the exhaust gas is reported, a record of the following:
 1. Scrubber pressure drop averaged over each 1-hour incinerator operating period.
 2. Oxygen content in the incinerator exhaust averaged over each 1-hour incinerator operating period.
 3. Temperatures of each hearth of the incinerator averaged over each 1-hour incinerator operating period.
 4. Rate of sludge charged to the incinerator averaged over each 1-hour incinerator operating period.
 5. Incinerator fuel use averaged over each 8-hour incinerator operating period.
 6. Moisture and volatile solid content of the daily grab sample of sludge charged to the incinerator. [Permit Nos. 075-0006 and 075-0007 and 40 CFR 60, Subpart O, §60.155(b)]

A.9. VenturiPak Scrubber Tray Water Flow Rate: The VenturiPak scrubber tray water flow rate shall not decrease below the limit in condition A.9, Table III.A of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

The Permittee shall install, calibrate, maintain and operate a monitoring device that continuously measures and records the VenturiPak scrubber tray water flow rate. This device shall be certified by the manufacturer to be accurate within $\pm 5\%$ over its operating range and shall be calibrated on an annual basis in accordance with the manufacturer's instructions. [Permit Nos. 075-0006 and 075-0007]

b. Recordkeeping Requirements

The Permittee shall keep calibration and maintenance records and original instrument recordings for all continuous monitoring instruments and equipment. [Permit Nos. 075-0006 and 075-0007]

A.10. Particulate Matter: The particulate matter emissions shall not exceed the limit in condition A.10, Table III.A of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

The Permittee shall stack test every five years to determine compliance with the particulate emission limit. [Permit Nos. 075-0006, 075-0007 and 40 CFR 60, Subpart O §60.152]

b. Record Keeping Requirements

The Permittee shall keep stack test records. [RCSA §22a-174-4(d)(1)]

Section III: Applicable Requirements and Compliance Demonstration

A.11. Opacity: Opacity shall not exceed the limit in condition A.11, Table III.A of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

- i. The Permittee shall use Method 9 and the procedures in 40 CFR 60, Subpart A, §60.11 to determine opacity. [40 CFR 60, Subpart O, §60.154(b)(6)]
- ii. The Permittee shall not cause or allow unburned waste or ash particulate emission that are individually discernible by the human eye measured using 40 CFR 60, Appendix A, Reference Method 9 and 40 CFR 60, Appendix A, Reference Method 22. [RCSA §22a-174-18(d)(3)]

b. Record Keeping Requirements

The Permittee shall keep and maintain records of opacity readings. [RCSA §22a-174-4(d)(1)]

A.12. Criteria Pollutants: Criteria pollutant emissions shall not exceed the limits in condition A.12, Table III.A of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

- i. Stack testing is required every five years to determine emissions of the following criteria pollutants: [Permit Nos. 075-0006 and 075-0007]
 1. NO_x, expressed as NO₂
 2. CO
 3. SO_x, expressed as SO₂
 4. Total VOC, THC
 5. TSP
- ii. The Permittee shall conduct emission testing at least once every five years. The five-year period shall begin once the last NO_x emission tests are completed. Compliance with the 0.33 lb NO_x/MMBTU emission limitation shall be determined based on, but not limited to, the average of three 1-hour tests, each performed over a consecutive 60-minute period. [RCSA §22a-174-22(k)(1)]
- iii. Sampling shall be conducted when the source is at normal operating temperature and, unless otherwise allowed by the Commissioner in a permit or order, is operating at or above 90% of maximum rated capacity. [RCSA §22a-174-22(k)(1)]
- iv. The Permittee shall submit a written intent-to-test (ITT) protocol for the Commissioner's review and written approval not less than 60 days prior to the emissions testing. The ITT submission shall comply with the Department of Environmental Protection Emission Test Guidelines and Form AE-404. [RCSA §22a-174-5(d)]
- v. The Permittee shall install, maintain and operate a monitoring device that continuously measures and records the total hydrocarbons (THC) concentration of the incinerator exhaust gas in accordance with the requirements of 40 CFR 503, Subpart E, §503.45(a)(2). [Permit Nos. 075-0006, 075-0007 and 40 CFR 503, Subpart E, §503.45(a)(1) and §503.46(b)]
- vi. A monitoring device that continuously measures and records information used to determine the moisture content of the incinerator exhaust gas will be required if THC monitoring is required by 40 CFR Part 503. [Permit Nos. 075-0006 and 075-0007]

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- vii. The Permittee shall provide access to the sludge charged so that a well-mixed representative grab sample of the sludge can be obtained. [40 CFR 60, Subpart O, §60.153(a)(2)]
 - viii. The Permittee shall collect and analyze a grab sample of the sludge fed to the incinerator once per day. The dry sludge content and the volatile solids content of the sample shall be determined in accordance with the method specified under 40 CFR §60.154(b)(5), except that the determination of volatile solids, step (3)(b) of the method, shall not be deleted. [Permit Nos. 075-0006, 075-0007, 40 CFR 60, Subpart O, §60.154(b)(5)]
 - ix. The Permittee shall install, calibrate, maintain and operate a monitoring device that continuously measures and records the oxygen content (wet) of the incinerator exhaust gas. The oxygen monitoring device shall be certified by the manufacturer to have an accuracy of $\pm 5\%$ over its operating range and shall be calibrated in accordance with the manufacturer's instructions at least once each 24-hour period. [Permit Nos. 075-0006, 075-0007, 40 CFR Part 60, Subpart O, §60.153(b)(2) and §60.153(c)(3) and 40 CFR 503, Subpart E, §503.45(b and c)]
- b. Record Keeping Requirements
- i. The Permittee shall keep calibration and maintenance records and original instrument recordings for all continuous monitoring instruments and equipment. [Permit Nos. 075-0006 and 075-0007]
 - ii. The Permittee shall keep stack test records. [RCSA §22a-174-4(d)(1)]
 - iii. The Permittee shall create and retain daily records of total hydrocarbons concentrations in the exit gas from the incinerator stack. [40 CFR 503, Subpart E, §503.47(c)]
 - iv. The Permittee shall create and retain a calibration and maintenance log for the instruments used to measure the total hydrocarbons concentration and oxygen concentration in the exit gas from the sewage sludge incinerator stack, the information needed to determine moisture content in the exit gas, and the combustion temperatures. [40 CFR 503, Subpart E, §503.47(n)]
 - v. The Permittee shall create and retain daily records of the total solids and volatile solids content of the sludge charged to the incinerator. [Permit Nos. 075-0006, 075-0007 and 40 CFR 60, Subpart O, §60.153(c)(3)]
 - vi. The Permittee shall create and retain daily records of the measured oxygen content of the incinerator exhaust gas. [40 CFR 60, Subpart O, §60.153(c)(2)]
 - vii. The Permittee shall create and retain daily records of the oxygen concentration and information used to measure moisture content from the sewage sludge incinerator stack. [40 CFR 503, Subpart E, §503.47(h)]
- c. Reporting Requirements
- i. The Permittee shall submit a written report to the Bureau and to EPA Region I for each semi-annual period ending June 30 and December 31 of each year, containing a record of the average oxygen content in the incinerator exhaust for each period of 1-hour duration or more that the oxygen content of the incinerator exhaust gas exceeds the average oxygen content measured during the most recent performance test by more than 3%. [Permit Nos. 075-0006, 075-0007 and 40 CFR Part 60, Subpart O, §60.155(a)(2)]

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- ii. The Permittee shall submit a written report for each calendar day that a decrease in scrubber pressure drop or increase in oxygen content of the exhaust gas is reported, a record of the following: [Permit Nos. 075-0006, 075-0007, 40 CFR Part 60, Subpart O, §60.155(b)]
 - 1. Scrubber pressure drop averaged over each 1-hour incinerator operating period.
 - 2. Oxygen content in the incinerator exhaust averaged over each 1-hour incinerator operating period.
 - 3. Temperatures of each hearth of the incinerator averaged over each 1-hour incinerator operating period.
 - 4. Rate of sludge charged to the incinerator averaged over each 1-hour incinerator operating period.
 - 5. Incinerator fuel use averaged over each 8-hour incinerator operating period.
 - 6. Moisture and volatile solid content of the daily grab sample of sludge charged to the incinerator.

A.13. HAP: HAP emissions shall not exceed the MASC limit in condition A.13, Table III.A of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

- i. Stack testing is required every five years to determine emissions of Sulfuric Acid and Hydrochloric Acid. [Permit Nos. 075-0006 and 075-0007]
- ii. The Permittee shall sample the effluent liquid, during stack testing required every five years, of the Venturi Pak scrubber to determine the levels of free and total cyanide. [Permit Nos. 075-0006 and 075-0007]
- iii. A GC/MS of VOC sample is required for the following pollutants to determine compliance with the requirements of RCSA §22a-174-29, the HAP section of the RCSA. [Permit Nos. 075-0006 and 075-0007]:
 - 1. Acrylonitrile
 - 2. Benzene
 - 3. Carbon Tetrachloride
 - 4. Chlorobenzene, Chloroform
 - 5. Di (2-Ethyl Hexyl) Phthalate
 - 6. 1, 2-Dichlorobenzene
 - 7. Ethylbenzene
 - 8. Ethylene Dichloride
 - 9. Methylene Chloride
 - 10. Perchloroethylene
 - 11. Phenol
 - 12. Furans
 - 13. Toluene
 - 14. 1,1,1-Trichloroethane
 - 15. Trichloroethylene
 - 16. Polychlorinated Biphenyls

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- iv. Testing for the following additional metals is required every five years to determine compliance with the requirements of RCSA §22a-174-29, the HAP section of the RCSA. [Permit Nos. 075-0006 and 075-0007]:
 - 1. Arsenic
 - 2. Cadmium
 - 3. Chromium
 - 4. Copper
 - 5. Manganese
 - 6. Nickel
 - 7. Selenium
 - 8. Zinc
 - 9. Lead
- v. Lead emissions shall not cause, or significantly contribute to a violation of the NAAQS. [Permit Nos. 075-0006, 075-0007 and RCSA §22a-174-3a(i)]

b. Record Keeping Requirements

- iv. The Permittee shall keep stack test records. [RCSA §22a-174-4(d)(1)]
- v. The Permittee shall create and retain records of the concentration of Lead, Arsenic, Cadmium, Chromium, and Nickel in the sewage sludge fed to the incinerator. [40 CFR 503, Subpart E, §503.47(b)]
- vi. The Permittee shall create and retain records of the control efficiency for Lead, Arsenic, Cadmium, and Nickel for each incinerator. [40 CFR 503, Subpart E, §503.47(l)]
- vii. The Permittee shall keep a record of the stack height of the incinerators. [40 CFR 503, Subpart E, §503.47(j)]
- viii. The Permittee shall keep a record of the dispersion factor for the site where the sewage sludge incinerator is located. [40 CFR 503, Subpart E, §503.47(k)]
- ix. The Permittee shall keep a record of the risk specific concentration for chromium calculated using equation (6) in 40 CFR 503, Subpart E, §503.43(d)(3). [40 CFR 503, Subpart E, §503.47(m)]

A.14. Beryllium: Beryllium emissions shall not exceed the limits in condition A.14, Table III.A of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

- i. Stack testing is required every five years to determine compliance with the beryllium emission limit. [Permit Nos. 075-0006, 075-0007 and 40 CFR 61, Subpart C §61.33]
- ii. The burning of beryllium and/or beryllium-containing waste, except propellants, is prohibited except in incinerators, emissions from which must comply with the standard. [40 CFR 61, Subpart C, §61.32(c)]

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b. Record Keeping Requirements

The Permittee shall create and retain records of emission test results and other data needed to determine total emissions. Such records shall be retained at the source and made available, for inspection by the Administrator. [40 CFR 61, Subpart C, §61.33(e)]

c. Reporting Requirements

All samples shall be analyzed and beryllium emissions shall be determined within 30 days after the source test. All determinations shall be reported to the Administrator before the close of the next business day following such determination. [40 CFR 61, Subpart C, §61.33(d)]

A.15. Mercury: Mercury emissions shall not exceed the limit in condition A.15, Table III.A of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

- i. Stack testing is required every five years to determine compliance with the mercury emission limit. [Permit Nos. 075-0006, 075-0007 and 40 CFR 61, Subpart E, §61.53(d)]
- ii. The Permittee shall demonstrate compliance with the emission standard by testing emissions per 40 CFR 61, Subpart E, §61.53(d) or by sludge sampling per 40 CFR 61, Subpart E, §61.54. [40 CFR 61, Subpart E, §61.53(d) and §61.54]

b. Record Keeping Requirements

The Permittee shall create and retain records of emission test results and other data needed to determine total emissions. Such records shall be retained at the source and made available, for inspection by the Administrator. [40 CFR 61, Subpart C, §61.53(d)(6)]

c. Reporting Requirements

All samples shall be analyzed and mercury emissions shall be determined within 30 days after the stack test. Each determination shall be reported to the Administrator within 15 calendar days following the date such determination is completed. [40 CFR 61, Subpart C, §61.53(d)(5)]

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B. EMISSIONS UNIT 003 (Nichols-Herreshoff Multiple Hearth Sludge Incinerator No. 3)

Table III.B: EU-003			
Pollutants or Process Parameters	Limitations or Restrictions	Applicable Regulatory References/Citations	Compliance Demonstration Requirements
Allowable Primary Fuels	Only sewage sludge may be fired in this unit. Any substance which is considered "municipal-type solid waste," as defined in 40 CFR, Part 60, §60.51a, or "hazardous waste," as defined in §22a-115 of the Connecticut General Statutes, is prohibited from being introduced to this unit. For the purposes of this permit, sewage sludge is defined as any solid, semi-solid or liquid residue from the pretreatment or primary, secondary or advanced treatment of domestic sewage, industrial wastewater, septage, portable toilet pumpings and grease traps.	Permit No. 075-008	B.1
Maximum Hourly Sludge Charging Rate	25,000 lb/hr	Permit No. 075-0008	B.2
Sludge Moisture and Volatile Solids Content	No limitations only monitoring and recordkeeping requirements	40 CFR 60, Subpart O, §60.153(a)(2), §60.154(b)(5) and §60.153(c)(3)	B.3
Auxiliary Fuel Firing Rate	No limitations only monitoring and recordkeeping requirements	40 CFR 60, Subpart O, §60.154(b)(4), §60.153(c)(3) and RCSA § 22a-174-4(d)(1)	B.4
Operating Combustion Temperature	Operation of the incinerator shall not cause the operating combustion temperature to exceed the performance test combustion temperature by more than 20 %	40 CFR 503, Subpart E, §503.45(e)	B.5
Impingement Tray Scrubber	No limitations only monitoring and recordkeeping requirements	Permit 075-0008	B.6
Incinerator Exhaust Oxygen Content	No limitations only monitoring and recordkeeping requirements	40 CFR Part 60, Subpart O, §60.153(b)(2) and §60.153(c)(3) and 40 CFR 503, Subpart E, §503.45(b and c)	B.7

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Table III.B: EU-003, Continued			
Pollutants or Process Parameters	Limitations or Restrictions	Applicable Regulatory References/Citations	Compliance Demonstration Requirements
Particulate Matter	1.30 lb/ton dry sludge input 0.4 lb/1E3 lb of flue gas (adjusted to 50% excess air)	40 CFR 60, Subpart O, §60.152(a)(1) and RCSA§22a-174-18(d)(2)(B)	B.8
Opacity	<20 %; except <40% for a period or periods aggregating not more than 5 minutes in any 60 minutes	RCSA §22a-174-4(c)(2) and 22a-174-18(b)	B.9
NO _x	0.33 lb/MMBTU	RCSA 22a-174-22(e)(2)(D)	B.10
VOC	100 ppmv (dry) at 7% O ₂ on a monthly average basis	40 CFR 503, Subpart E, §503.44(c)	B.11
HAP	$MASC = \{ (0.885 * HLV) * (X + 1.08 * V^{0.64})^{1.56} \exp[10.33 * (H - 20)^2 * (X + 1.08 * V^{0.64})^{-1.56}] \} / V$ MASC values are calculated based on the 8-hour HLV	RCSA §22a-174-29	B.12
Beryllium	0.022 pounds (10 grams) over a 24-hour period	40 CFR 61, Subpart C, §61.32(a)	B.13
Mercury	7.10 pounds (3,200 grams) over a 24-hour period	40 CFR 61, Subpart E, §61.52(b)	B.14

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Compliance Demonstration

B.1. Allowable Primary Fuels: Primary fuels fed the incinerator shall meet the limitations or restrictions in condition B.1, Table III.B of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

The Permittee shall monitor all materials that are fed to the incinerator. [RCSA §22a-174-4(d)(1) and RCSA §22a-174-33(j)(1)(K)]

b. Record Keeping Requirements

The Permittee shall record the date of all instances of incinerator feed materials that are not sewage sludge and record a description of the nonconforming materials, the quantity of such materials, and the source thereof. [RCSA §22a-174-4(d)(1)]

B.2. Maximum Hourly Sludge Charging Rate: The maximum hourly sludge charging rate shall not exceed the limit in condition B.2, Table III.B of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

i. The Permittee shall install, calibrate, maintain and operate a flow measuring device which can be used to determine either the mass or volume of sludge charged to the incinerator. The flow device shall be certified by the manufacturer to have an accuracy of $\pm 5\%$ over the operating range. [40 CFR Part 60, Subpart O, §60.153(a)(1)]

ii. The Permittee shall continuously measure and record the mass or volume of sludge charged to the incinerator. [40 CFR Part 60, Subpart O, §60.153 (a)(1)]

b. Record Keeping Requirements

i. The Permittee shall create and retain daily records of the rate of sludge charged to the incinerator. [40 CFR 60, Subpart O, §60.153(c)(3) and 40 CFR 503, Subpart E. §503.47(i)]

ii. The sludge hourly charging rate shall be based on a 30 day average as determined either by the product of the mass of wet sludge cake fed per unit time to the incinerator times the solids fraction or the product of the volumetric feed (in gallons of total wet feed per hour) times the density of wet feed to the dewatering operation times the solids fraction measured by the daily grab sample. [RCSA §22a-174-33(j)(1)(K)(ii)]

iii. The Permittee shall keep calibration and maintenance records and original instrument recordings for all continuous monitoring instruments and equipment. [RCSA §22a-174-4(d)(1)]

B.3. Sludge Moisture and Volatile Solids Content: The following are required:

a. Monitoring and Testing Requirements

i. The Permittee shall provide access to the sludge charged so that a well-mixed representative grab sample of the sludge can be obtained. [40 CFR 60, Subpart O, §60.153(a)(2)]

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- ii. The Permittee shall collect and analyze a grab sample of the sludge fed to the incinerator once per day. The dry sludge content and the volatile solids content of the sample shall be determined in accordance with the method specified under 40 CFR §60.154(b)(5), except that the determination of volatile solids, step (3)(b) of the method, shall may be deleted. [40 CFR 60, Subpart O, §60.154(b)(5)]
- b. Record Keeping Requirements
The Permittee shall create and retain daily records of the total solids and volatile solids content of the sludge charged to the incinerator. [40 CFR 60, Subpart O, §60.153(c)(3)]

B.4. Auxiliary Fuel Firing Rate: The following are required:

- a. Monitoring and Testing Requirements
The Permittee shall install, calibrate, maintain and operate a monitoring device for measuring the auxiliary fuel flow to each incinerator. The auxiliary flow measuring device shall be certified by the manufacturer to have an accuracy of $\pm 5\%$ over the operating range. The fuel flow measuring device shall be operated continuously. [40 CFR 60, Subpart O, §60.154(b)(4)]
- b. Record Keeping Requirements
 - i. The Permittee shall keep calibration and maintenance records and original instrument recordings for all continuous monitoring instruments and equipment. [RCSA §22a-174-4(d)(1)]
 - ii. The Permittee shall create and retain daily records of the auxiliary fuel flow to the incinerator. [40 CFR 60, Subpart O, §60.153(c)(3)]

B.5. Operating Combustion Temperature: The following are required:

- a. Monitoring and Testing Requirements
 - i. The Permittee shall install, calibrate, maintain and operate a temperature measuring device in each hearth, including the after burner, and at the outlet of the incinerator. Each temperature device shall be certified by the manufacturer to have an accuracy of $\pm 5\%$ over its operating range. Each temperature measuring device shall be operated continuously. [40 CFR 60, Subpart O, §60.153(b)(3), and 40 CFR 503, Subpart E, §503.45(d)]
 - ii. Operation of the incinerator shall not cause the operating combustion temperature to exceed the performance test combustion temperature by more than 20 percent. [40 CFR 503, Subpart E, §503.45(e)]
- b. Record Keeping Requirements
 - i. The Permittee shall create and retain daily records of the measured temperatures of the incinerator. [40 CFR 60, Subpart O, §60.153(c)(3) and 40 CFR 503, Subpart E, §503.47(f)]
 - ii. The Permittee shall create and retain a calibration and maintenance log for the instruments used to measure the total hydrocarbons concentration and oxygen concentration in the exit gas from the sewage sludge incinerator stack, the information needed to determine moisture content in the exit gas, and the combustion temperatures. [40 CFR 503, Subpart E, §503.47(n)]

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B.6. Impingement Tray Scrubber: The following are required:

a. Monitoring and Testing Requirements

The Permittee shall install, calibrate, maintain and operate a monitoring device that continuously measures and records the Impingement Tray scrubber gas flow pressure drop. This device shall be certified by the manufacturer to be accurate within 1 inch of water gauge and shall be calibrated on an annual basis in accordance with the manufacturer's instructions. [40 CFR 60, Subpart O, §60.153(b)(1)]

b. Record Keeping Requirements

The Permittee shall create and retain daily records of the measured pressure drop of the gas flow through the wet scrubbing device. [40 CFR 60, Subpart O, §60.153(c)(1)]

c. Reporting Requirements

- i. The Permittee shall submit to the Administrator semi-annually a written report containing a record of the average scrubber pressure drop measurements for each period of 15 minutes duration or more during which the pressure drop of the scrubber was less than 30% from the average pressure drop measured during the most recent performance test. [40 CFR 60, Subpart O, §60.155(a)(1)]
- ii. The Permittee shall submit a written report for each calendar day that a decrease in scrubber pressure drop or increase in oxygen content of the exhaust gas is reported, a record of the following:
 1. Scrubber pressure drop averaged over each 1-hour incinerator operating period.
 2. Oxygen content in the incinerator exhaust averaged over each 1-hour incinerator operating period.
 3. Temperatures of each hearth of the incinerator averaged over each 1-hour incinerator operating period.
 4. Rate of sludge charged to the incinerator averaged over each 1-hour incinerator operating period.
 5. Incinerator fuel use averaged over each 8-hour incinerator operating period.
 6. Moisture and volatile solid content of the daily grab sample of sludge charged to the incinerator. [40 CFR 60, Subpart O, §60.155(b)]

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B.7. Incinerator Exhaust Oxygen Content: The following are required:

a. Monitoring and Testing Requirements

The Permittee shall install, calibrate, maintain and operate a monitoring device that continuously measures and records the oxygen content (wet) of the incinerator exhaust gas. The oxygen monitoring device shall be certified by the manufacturer to have an accuracy of $\pm 5\%$ over its operating range and shall be calibrated in accordance with the manufacturer's instructions at least once each 24-hour period. [40 CFR Part 60, Subpart O, §60.153(b)(2) and §60.153(c)(3) and 40 CFR 503, Subpart E, §503.45(b and c)]

b. Record Keeping Requirements

- i. The Permittee shall keep calibration and maintenance records and original instrument recordings for all continuous monitoring instruments and equipment. [RCSA 22a-174-4(d)(1)]
- ii. The Permittee shall create and retain daily records of the measured oxygen content of the incinerator exhaust gas. [40 CFR 60, Subpart O, §60.153(c)(2)]
- iii. The Permittee shall create and retain daily records of the oxygen concentration and information used to measure moisture content from the sewage sludge incinerator stack. [40 CFR 503, Subpart E, §503.47(h)]
- iv. The Permittee shall create and retain a calibration and maintenance log for the instruments used to measure the total hydrocarbons concentration and oxygen concentration in the exit gas from the sewage sludge incinerator stack, the information needed to determine moisture content in the exit gas, and the combustion temperatures. [40 CFR 503, Subpart E, §503.47(n)]

c. Reporting Requirements

- i. The Permittee shall submit a written report to the Bureau and to EPA Region I for each semi-annual period ending June 30 and December 31 of each year, containing a record of the average oxygen content in the incinerator exhaust for each period of 1-hour duration or more that the oxygen content of the incinerator exhaust gas exceeds the average oxygen content measured during the most recent performance test by more than 3%. [Permit Nos. 075-0006, 075-0007 and 40 CFR Part 60, Subpart O, §60.155(a)(2)]
- ii. The Permittee shall submit a written report for each calendar day that a decrease in scrubber pressure drop or increase in oxygen content of the exhaust gas is reported, a record of the following:
 1. Scrubber pressure drop averaged over each 1-hour incinerator operating period.
 2. Oxygen content in the incinerator exhaust averaged over each 1-hour incinerator operating period.
 3. Temperatures of each hearth of the incinerator averaged over each 1-hour incinerator operating period.
 4. Rate of sludge charged to the incinerator averaged over each 1-hour incinerator operating period.
 5. Incinerator fuel use averaged over each 8-hour incinerator operating period.
 6. Moisture and volatile solid content of the daily grab sample of sludge charged to the incinerator. [40 CFR 60, Subpart O, §60.155(b)]

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B.8. Particulate Matter: The particulate matter emissions shall not exceed the limit in condition B.8, Table III.B of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

The Permittee shall calculate daily particulate matter emissions. [RCSA §22a-174-33(j)(1)(K)(ii)]

b. Record Keeping Requirements

The Permittee shall create and retain daily records of the particulate emissions. [RCSA §22a-174-4(d)(1)]

B.9. Opacity: Opacity shall not exceed the limit in condition B.9, Table III.B of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

i. The Permittee shall use Method 9 and the procedures in 40 CFR 60, Subpart A, §60.11 to determine opacity. [40 CFR 60, Subpart O, §60.154(b)(6)]

ii. The Permittee shall not cause or allow unburned waste or ash particulate emission that are individually discernible by the human eye measured using 40 CFR 60, Appendix A, Reference Method 9 and 40 CFR 60, Appendix A, Reference Method 22. [RCSA §22a-174-18(d)(3)]

b. Record Keeping Requirements

The Permittee shall keep and maintain records of opacity readings. [RCSA §22a-174-4(d)(1)]

B.10. NO_x: NO_x emissions shall not exceed the limit in condition B.10, Table III.B of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

i. The Permittee shall conduct emission testing at least once every five years. The five-year period shall begin once the last NO_x emission tests are completed. Compliance with the 0.33 lb NO_x/MMBTU emission limitation shall be determined based on the average of three 1-hour tests, each performed over a consecutive 60-minute period. [RCSA §22a-174-22(k)(1)]

ii. Sampling shall be conducted when the source is at normal operating temperature and, unless otherwise allowed by the Commissioner in a permit or order, is operating at or above 90% of maximum rated capacity. [RCSA §22a-174-22(k)(1)]

iii. The Permittee shall submit a written intent-to-test (ITT) protocol for the Commissioner's review and written approval not less than 60 days prior to the emissions testing. The ITT submission shall comply with the Department of Environmental Protection Emission Test Guidelines and Form AE-404. [RCSA §22a-174-5(d)]

b. Record Keeping Requirements

The Permittee shall keep stack test records. [RCSA §22a-174-4(d)(1)]

B.11. VOC: VOC emissions shall not exceed the limit in condition B.11, Table III.B of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

The Permittee shall install, maintain and operate a monitoring device that continuously measures and

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records the total hydrocarbons (THC) concentration of the incinerator exhaust gas in accordance with the requirements of 40 CFR 503, Subpart E, §503.45(a)(2). [40 CFR 503, Subpart E, §503.45(a)(1) and §503.46(b)]

b. Record Keeping Requirements

- i. The Permittee shall create and retain daily records of total hydrocarbons concentrations in the exit gas from the incinerator stack. [40 CFR 503, Subpart E, §503.47(c)]
- ii. The Permittee shall create and retain a calibration and maintenance log for the instruments used to measure the total hydrocarbons concentration and oxygen concentration in the exit gas from the sewage sludge incinerator stack, the information needed to determine moisture content in the exit gas, and the combustion temperatures. [40 CFR 503, Subpart E, §503.47(n)]

B.12. HAP: HAP emissions shall not exceed the MASC limits in condition B.12, Table III.B of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

- i. The Permittee shall determine the ASC of all HAPs. [RCSA §22a-174-33(j)(1)(K)(ii)]
- ii. The Permittee shall calculate the average daily concentration of lead emissions. [RCSA §22a-174-33(j)(1)(K)(ii)]
- iii. Lead emissions shall not cause, or significantly contribute to a violation of the NAAQS. [Permit Nos. 075-0006, 075-0007 and RCSA §22a-174-3a(i)]

b. Record Keeping Requirements

- i. The Permittee shall create and retain records of the concentration of Lead, Arsenic, Cadmium, Chromium, and Nickel in the sewage sludge fed to the incinerator. [40 CFR 503, Subpart E, §503.47(b)]
- ii. The Permittee shall create and retain records of the control efficiency for Lead, Arsenic, Cadmium, and Nickel for each incinerator. [40 CFR 503, Subpart E, §503.47(l)]
- iii. The Permittee shall keep a record of the stack height of the incinerators. [40 CFR 503, Subpart E, §503.47(j)]
- iv. The Permittee shall keep a record of the dispersion factor for the site where the sewage sludge incinerator is located. [40 CFR 503, Subpart E, §503.47(k)]
- v. The Permittee shall keep a record of the risk specific concentration for chromium calculated using equation (6) in 40 CFR 503, Subpart E, §503.43(d)(3). [40 CFR 503, Subpart E, §503.47(m)]
- vi. The Permittee shall keep records of lead actual stack emissions. [RCSA §22a-174-4(d)(1)]

B.13. Beryllium: Beryllium emissions shall not exceed the limit in condition B.13, Table III.B of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

Section III: Applicable Requirements and Compliance Demonstration

a. Monitoring and Testing Requirements

- i. Stack testing is required every five years to determine compliance with the beryllium emission limit. [40 CFR 61, Subpart C §61.33]
- ii. The burning of beryllium and/or beryllium-containing waste, except propellants, is prohibited except in incinerators, emissions from which must comply with the standard. [40 CFR 61, Subpart C, §61.32(c)]

b. Record Keeping Requirements

The Permittee shall create and retain records of emission test results and other data needed to determine total emissions. Such records shall be retained at the source and made available, for inspection by the Administrator. [40 CFR 61, Subpart C, §61.33(e)]

c. Reporting Requirements

All samples shall be analyzed and beryllium emissions shall be determined within 30 days after the source test. All determinations shall be reported to the Administrator before the close of the next business day following such determination. [40 CFR 61, Subpart C, §61.33(d)]

B.14. Mercury: Mercury emissions shall not exceed the limit in condition B.14, Table III.B of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

- i. Stack testing is required every five years to determine compliance with the mercury emission limit. [40 CFR 61, Subpart E, §61.53(d)]
- ii. The Permittee shall demonstrate compliance with the emission standard by testing emissions per 40 CFR 61, Subpart E, §61.53(d) or by sludge sampling per 40 CFR 61, Subpart E, §61.54. [40 CFR 61, Subpart E, §61.53(d) and §61.54]

b. Record Keeping Requirements

The Permittee shall create and retain records of emission test results and other data needed to determine total emissions. Such records shall be retained at the source and made available, for inspection by the Administrator. [40 CFR 61, Subpart C, §61.53(d)(6)]

c. Reporting Requirements

All samples shall be analyzed and mercury emissions shall be determined within 30 days after the stack test. Each determination shall be reported to the Administrator within 15 calendar days following the date such determination is completed. [40 CFR 61, Subpart C, §61.53(d)(5)]

Section III: Applicable Requirements and Compliance Demonstration

C. GEU-002 (Five Identical Final Effluent Pumps-Caterpillar Diesel Generators)

Table III.C: GEU-002 (EU-004-008)						
Pollutants or Process Parameters	Limitations or Restrictions				Applicable Regulatory References/ Citations	Compliance Demonstration Requirements
Maximum Diesel Fuel Consumption	57,870 gal over a 12 month period for each engine				Permit Nos. 075-0213 through 075-0217	C.1
Fuel Sulfur Content	0.05% by weight, dry basis				Permit Nos. 075-0213 through 075-0217	C.2
Criteria Pollutants	Pollutant	lb/hr	lb/MM BTU	TPY	Permit Nos. 075-0213 through 075-0217	C.3
	TSP	0.112	0.100	0.151		
	PM ₁₀	0.112	0.100	0.151		
	SO _x	0.325	0.290	0.437		
	NO _x	3.229	2.883	4.346		
	VOC	0.099	0.088	0.133		
	CO	0.900	0.804	1.212		
Sulfuric Acid	1086.57 µg/m ³				Permit Nos. 075-0213 through 075-0217	C.4

Compliance Demonstration

C.1. Maximum Diesel Fuel Consumption: Maximum diesel fuel consumption shall not exceed the limits in condition C.1, Table III.C of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

When more than one fuel supply tank is to service this source or when multiple sources are supplied by one fuel tank, the Permittee shall use a fuel metering device to continuously monitor fuel feed to this permitted source. [Permit Nos. 075-0213 through 075-0217]

b. Record Keeping Requirements

Fuel consumption shall be based on any consecutive 12 month time period and shall be determined by adding (for each fuel) the current month's fuel usage to that of the previous 11 months. The Permittee shall make these calculations monthly. [Permit Nos. 075-0213 through 075-0217]

Section III: Applicable Requirements and Compliance Demonstration

C.2. Fuel Sulfur Content: The fuel sulfur content shall not exceed the limit in condition C.2, Table III.C of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

- a. Monitoring and Testing Requirements
Each oil fuel shipment for this equipment shall include a shipping receipt from the fuel supplier and a certification from the fuel supplier certifying the type of fuel in the shipment and the weight percent of sulfur in the fuel. The shipping receipt and/or certification shall include the name of the oil supplier, the sulfur content of the oil and the method used to determine the sulfur content of the oil. [Permit Nos. 075-0213 through 075-0217]
- b. Record Keeping Requirements
The Permittee shall maintain records of each oil fuel shipping receipt and certification. [Permit Nos. 075-0213 through 075-0217]

C.3. Criteria Pollutant: Criteria pollutant emissions shall not exceed the limits in condition C.3, Table III.C of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

- a. Monitoring and Testing Requirements
 - i. Demonstration of compliance with the emission limit shall be met by calculating the emission rate using emission factors from vendor data. [Permit Nos. 075-0213 through 075-0217]
 - ii. The engine shall not be operated for routine, scheduled testing or maintenance on any day for which the Commissioner has forecast that ozone levels will be “moderate to unhealthy,” “unhealthy,” or “very unhealthy.” [RCSA §22a-174-22(b)(5)]
- b. Record Keeping Requirements
 - i. The Permittee shall keep records of emission rate calculations. [RCSA §22a-174-4(d)(1)]
 - ii. The Permittee shall keep records of engine operating hours and dates, identifying the operating hours of emergency and non-emergency use. If engine operation is for non-emergency use, Permittee shall indicate if purpose is for routine, scheduled testing, maintenance, or actual use for electricity generation. [RCSA §22a-174-22(1)(l)]

C.4. Sulfuric Acid: Sulfuric acid emissions shall not exceed the limit in condition C.4, Table III.C of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

- a. Monitoring and Testing Requirements
Demonstration of compliance with the emission limit shall be met by calculating the emission rate using emission factors from vendor data. [Permit Nos. 075-0213 through 075-0217]
- b. Record Keeping Requirements
The Permittee shall keep records of emission rate calculations. [RCSA §22a-174-4(d)(1)]

Section III: Applicable Requirements and Compliance Demonstration

D. EMISSIONS UNIT 009 (Emergency Generator-Caterpillar Diesel Generator Model 3412)

Table III.D: EU-009						
Pollutants or Process Parameters	Limitations or Restrictions				Applicable Regulatory References/Citations	Compliance Demonstration Requirements
Maximum Diesel Fuel Consumption	14,700 gal over a 12 month period				Permit No. 075-0212	D.1
Fuel Sulfur Content	0.05% by weight, dry basis				Permit No. 075-0212	D.2
Criteria Pollutants					Permit No. 075-0212	D.3
	Pollutant	lb/hr	lb/MMBTU	TPY		
	TSP	0.811	0.100	0.101		
	PM ₁₀	0.811	0.100	0.101		
	SO _x	2.353	0.290	0.294		
	NO _x	26.154	3.225	3.269		
	VOC	3.408	0.420	0.426		
	CO	7.709	0.951	0.964		
Sulfuric Acid	0.0072	0.0009	0.0009			
Sulfuric Acid	1345.02 µg/m ³				Permit No. 075-0212	D.4

Compliance Demonstration

D.1. Maximum Diesel Fuel Consumption: Maximum diesel fuel consumption shall not exceed the limit in condition D.1, Table III.D of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

- a. Monitoring and Testing Requirements
When more than one fuel supply tank is to service this source or when multiple sources are supplied by one fuel tank, the Permittee shall use a fuel metering device to continuously monitor fuel feed to this permitted source. [Permit No. 175-0212]
- b. Record Keeping Requirements
Fuel consumption shall be based on any consecutive 12 month time period and shall be determined by adding (for each fuel) the current month's fuel usage to that of the previous 11 months. The Permittee shall make these calculations monthly. [Permit No. 075-0212]

D.2. Fuel Sulfur Content: The fuel sulfur content shall not exceed the limit in condition D.2, Table III.D of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

- a. Monitoring and Testing Requirements
Each oil fuel shipment for this equipment shall include a shipping receipt from the fuel supplier and a certification from the fuel supplier certifying the type of fuel in the shipment and the weight percent of sulfur in the fuel. The shipping receipt and/or certification shall include the name of the oil supplier, the sulfur content of the oil and the method used to determine the sulfur content of the oil. [Permit No. 075-0212]

Section III: Applicable Requirements and Compliance Demonstration

b. Record Keeping Requirements

The Permittee shall maintain records of each oil fuel shipping receipt and certification. [Permit No. 075-0212]

D.3. Criteria Pollutants: The criteria pollutant emissions shall not exceed the limits in condition D.3, Table III.D of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

- i. Demonstration of compliance with the emission limit shall be met by calculating the emission rate using emission factors from AP-42, fifth edition dated January 1995, and FIRE, version 5.0, dated August 1995. [Permit No. 075-0212]
- ii. The engine shall not be operated for routine, scheduled testing or maintenance on any day for which the Commissioner has forecast that ozone levels will be “moderate to unhealthy,” “unhealthy,” or “very unhealthy.” [RCSA §22a-174-22(b)(5)]

b. Record Keeping Requirements

- i. The Permittee shall keep records of emission rate calculations. [RCSA §22a-174-4(d)(1)]
- ii. The Permittee shall keep records of engine operating hours and dates, identifying the operating hours of emergency and non-emergency use. If engine operation is for non-emergency use, Permittee shall indicate if purpose is for routine, scheduled testing, maintenance, or actual use for electricity generation. [RCSA §22a-174-22(1)(1)]

D.4. Sulfuric Acid: Sulfuric acid emissions shall not exceed the limit in condition D.4, Table III.D of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

Demonstration of compliance with the emission limit shall be met by calculating the emission rate using emission factors from AP-42, fifth edition dated January 1995, and FIRE, version 5.0, dated August 1995. [Permit No. 075-0212]

b. Record Keeping Requirements

The Permittee shall keep records of emission rate calculations. [RCSA §22a-174-4(d)(1)]

E. EMISSIONS UNIT 010 (Caterpillar XQ350 Generator Set, SN# 4JK00628)

Table III.E: EU-010			
Pollutants or Process Parameters	Limitations or Restrictions	Applicable Regulatory References/ Citations	Compliance Demonstration Requirements
Maximum # 2 Fuel Oil Consumption	13,300 gal over a 12 month period	Permit No. 075-0343	E.1
Fuel Sulfur Content	0.05% by weight, dry basis	Permit No. 075-0343	E.2

Section III: Applicable Requirements and Compliance Demonstration

Table III.E: EU-010, Continued																										
Pollutants or Process Parameters	Limitations or Restrictions			Applicable Regulatory References/ Citations	Compliance Demonstration Requirements																					
Criteria Pollutants	<table><tr><td>Pollutant</td><td>lb/hr</td><td>TPY</td></tr><tr><td>TSP</td><td>0.460</td><td>0.114</td></tr><tr><td>PM₁₀</td><td>0.460</td><td>0.114</td></tr><tr><td>SO_x</td><td>0.190</td><td>0.048</td></tr><tr><td>NO_x</td><td>7.890</td><td>1.974</td></tr><tr><td>VOC</td><td>1.140</td><td>0.286</td></tr><tr><td>CO</td><td>9.730</td><td>2.431</td></tr></table>			Pollutant	lb/hr	TPY	TSP	0.460	0.114	PM ₁₀	0.460	0.114	SO _x	0.190	0.048	NO _x	7.890	1.974	VOC	1.140	0.286	CO	9.730	2.431	Permit No. 075-0343	E.3
	Pollutant	lb/hr	TPY																							
	TSP	0.460	0.114																							
	PM ₁₀	0.460	0.114																							
	SO _x	0.190	0.048																							
	NO _x	7.890	1.974																							
	VOC	1.140	0.286																							
CO	9.730	2.431																								
Sulfuric Acid	594 µg/m ³			Permit No. 075-0343	E.4																					
NO _x	8 gm./bk. hp-hr			RCSA §22a-174-22(e)(1)	E.5																					

Compliance Demonstration

E.1. Maximum # 2 Fuel Oil Consumption: Maximum #2 fuel oil consumption shall not exceed the limits in condition E.1, Table III.E of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

- a. Monitoring and Testing Requirements
When more than one fuel supply tank is to service this source or when multiple sources are supplied by one fuel tank, the Permittee shall use a fuel metering device to continuously monitor fuel feed to this permitted source. [Permit No. 075-0343]
- b. Record Keeping Requirements
Fuel consumption shall be based on any consecutive 12 month time period and shall be determined by adding (for each fuel) the current month's fuel usage to that of the previous 11 months. The Permittee shall make these calculations monthly. [Permit No. 075-0343]

E.2. Fuel Sulfur Content: The fuel sulfur content shall not exceed the limit in condition E.2, Table III.E of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

- a. Monitoring and Testing Requirements
Each oil fuel shipment for this equipment shall include a shipping receipt from the fuel supplier and a certification from the fuel supplier certifying the type of fuel in the shipment and the weight percent of sulfur in the fuel. The shipping receipt and/or certification shall include the name of the oil supplier, the sulfur content of the oil and the method used to determine the sulfur content of the oil. [Permit No. 075-0343]

Section III: Applicable Requirements and Compliance Demonstration

b. Record Keeping Requirements

The Permittee shall maintain records of each shipping receipt and certification. [Permit No. 075-0343]

E.3. Criteria Pollutants: The criteria pollutant emissions shall not exceed the limits in condition E.3, Table III.E of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

Demonstration of compliance with the emission limits shall be met by calculating the emission rates using emission factors from the following sources:

1. TSP, PM₁₀, NO_x, VOC, CO: Caterpillar Manufacturer's information.
2. SO_x: BAM Memo. SO_x Emission Factors For All Fuel-Oil Burning Sources. May 23, 1991.
3. Sulfuric Acid: BAM Memo, Emission Factor for Sulfuric Acid formation, Fuel Burning Sources, November 27, 1987. [Permit No. 075-0343]

b. Record Keeping Requirements

The Permittee shall keep records of emission rate calculations. [RCSA §22a-174-4(d)(1)]

E.4. Sulfuric Acid: Sulfuric acid emissions shall not exceed the limits in condition E.4, Table III.E of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

Demonstration of compliance with the emission limit shall be met by calculating the emission rates using emission factors from BAM Memo, Emission Factor for Sulfuric Acid formation, Fuel Burning Sources, November 27, 1987. [Permit No. 075-0343]

b. Record Keeping Requirements

The Permittee shall keep records of emission rate calculations. [RCSA §22a-174-4(d)(1)]

E.5. NO_x: NO_x emissions shall not exceed the limits in condition E.5, Table III.E of this Title V Operating Permit. Demonstration of compliance shall be based on, but not limited to, the following requirements:

a. Monitoring and Testing Requirements

Stack testing is required to determine compliance with the emission limit. [Permit No. 075-0343]

b. Record Keeping Requirements

The Permittee shall keep stack test records. [RCSA §22a-174-4(d)(1)]

Section III: Applicable Requirements and Compliance Demonstration

F. PREMISES-WIDE GENERAL REQUIREMENTS

Table III.F: PREMISES-WIDE GENERAL REQUIREMENTS		
Pollutants or Process Parameters	Applicable Regulatory References/Citations	Compliance Demonstration Requirements
Annual Emission Statements	RCSA §22a-174-4	The Permittee shall submit annual emission inventory statements requested by the Commissioner as specified in RCSA § 22a-174-4(d)(1).
Operation of Air Pollution Control Equipment and Monitoring Equipment	RCSA §22a-174-7	<ul style="list-style-type: none"> i. While a stationary source is in operation, the Permittee shall not deliberately shut down any operational air pollution control or monitoring equipment or deliberately keep such air pollution control equipment or monitoring equipment shut down except to perform necessary maintenance, which cannot be accomplished when the stationary source itself is not in operation and is not emitting air pollutants. [RCSA §22a-174-7(b)(1)] ii. The Permittee may deliberately shut down air pollution control equipment or monitoring equipment while the source is in operation if: [RCSA §22a-174-7(b)(2)] <ul style="list-style-type: none"> A. The Permittee is not required to operate such equipment by a permit, order or regulation; B. The source is in compliance with applicable emission limitations and emission standards while the air pollution control equipment is shut down; and C. Emissions released while monitoring equipment that measures such emissions is deliberately shut down are not used to calculate credits generated in an emissions credit trading program. iii. If any breakdown, failure or deliberate shutdown of air pollution control equipment or monitoring equipment required by permit, order or regulation continues for more than 24 hours and the source operates at any time after the expiration of 24 hours and during source operation after the breakdown, failure or deliberate shutdown an exceedance of any emission limitation or standard occurs, the Permittee shall submit a written notice to the commissioner post marked within 10 days of the commencement of the breakdown, failure or deliberate shutdown. Such written notice shall include, but is not limited to, the following: [RCSA §22a-174-7(d)] <ul style="list-style-type: none"> A. Identification of the specific air pollution control or monitoring equipment subject to the breakdown, failure or deliberate shutdown, as well as information concerning its location, and where applicable, registration or permit number; B. The date, time, duration, explanation and description of each breakdown, failure or deliberate shutdown of the air pollution control or monitoring equipment; C. The nature and quantity of air pollutants emitted during the period that the pollution control or monitoring equipment is not operating; D. Identification of dates of inspection and maintenance of the subject equipment prior to the breakdown, failure or deliberate shutdown, including a description of inspection findings and any maintenance conducted;

Section III: Applicable Requirements and Compliance Demonstration

Table III.F: PREMISES-WIDE GENERAL REQUIREMENTS, continued		
Pollutants or Process Parameters	Applicable Regulatory References/Citations	Compliance Demonstration Requirements
		<p>E. A description of all measures that the Permittee has taken or will take to resume operation of the air pollution control or monitoring equipment; and</p> <p>F. A description of all measures taken and continuing to be taken to minimize the length of the shutdown period such as the use of off-shift labor and equipment.</p>
Emergency Episode Procedures	RCSA §22a-174-6	The Permittee shall comply with the procedures for emergency episodes as specified in RCSA § 22a-174-6.
Prohibition of Air Pollution	<p>40 CFR Part 60 or 61</p> <p>RCSA §22a-174-9</p> <p>CGS §22a-184</p>	<p>i. The Permittee shall not permit or cause air pollution as defined in RCSA §22a-174-1. This applies to all air pollutants including those not otherwise covered by the RCSA §22a-174-1 through §22a-174-100.</p> <p>ii. The Permittee shall operate its premises in accordance with all applicable emissions standards, standards of performance, and any other applicable requirements under 40 CFR Part 60 or 61.</p>
Public Availability of Information	RCSA §22a-174-10	The public availability of information shall apply, as specified in RCSA § 22a-174-10.
Prohibition against Concealment/ circumvention	RCSA §22a-174-11	The Permittee shall comply with the prohibition against concealment or circumvention as specified in RCSA § 22a-174-11.
Fugitive Dust	RCSA §22a-174-18	The Permittee shall take all reasonable precautions to prevent particulate matter from becoming airborne pursuant to RCSA §22a-174-18.

Section III: Applicable Requirements and Compliance Demonstration

Table III.F: PREMISES-WIDE GENERAL REQUIREMENTS, continued		
Pollutants or Process Parameters	Applicable Regulatory References/Citations	Compliance Demonstration Requirements
Opacity	RCSA §22a-174-18(b)	<ul style="list-style-type: none"> i. The Permittee shall ensure opacity is less than 20% during any six-minute block average as measured by 40 CFR 60, Appendix A, Reference Method 9; or ii. The Permittee shall ensure opacity is no more than 40% as measured by 40 CFR 60, Appendix A, Reference Method 9, reduced to a one-minute block average.
NO _x	RCSA §22a-174-22(b)(5)	The Permittee shall not operate an engine for routine, scheduled testing or maintenance on any day for which the Commissioner has forecast that ozone levels will be “moderate to unhealthful,” “unhealthful,” or “very unhealthful.”
Mercury, metals and hydrocarbons	CGS 22a-191a(a) and 22a-191a(b)	The Permittee shall conduct a stack test for the presence of mercury, metals and hydrocarbons in the air emissions of each incinerator.
Emission Fees	RCSA §22a-174-26	The Permittee shall pay an emission fee in accordance with RCSA § 22a-174-26(d).
Sludge Incinerator Operation	Permit Nos. 075-0006 and 075-0007	Only two of the three Nichols-Herreshoff Incinerators may incinerate sewage sludge at the same time.

Section IV: Compliance Schedule

NOT APPLICABLE

Section V: State Enforceable Terms and Conditions

Only the Commissioner of the Department of Environmental Protection has the authority to enforce the terms, conditions and limitations contained in this section.

- A.** This permit does not relieve the Permittee of the responsibility to conduct, maintain and operate the emissions units in compliance with all applicable requirements of any other Bureau of the Department of Environmental Protection or any federal, local or other state agency. Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.
- B.** Nothing in this permit shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, investigate air pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of this or any other permit issued to the Permittee by the Commissioner.
- C.** Odors: The Permittee shall not cause or permit the emission of any substance or combination of substances which creates or contributes to an odor beyond the property boundary of the premises as set forth in RCSA §22a-174-23.
- D.** Noise: The Permittee shall operate in compliance with the regulations for the control of noise as set forth in RCSA §22a-69-1 through 22a-69-7.4, inclusive.
- E.** Hazardous Air Pollutants (HAPs): The Permittee shall operate in compliance with the regulations for the control of HAPs as set forth in RCSA §22a-174-29.
- F.** Open Burning: The Permittee is prohibited from conducting open burning, except as may be allowed by CGS §22a-174(f).
- G.** Fuel Sulfur Content: The Permittee shall not use # 2 heating oil that exceeds three-tenths of one percent sulfur by weight as set forth in CGS §16a-21a.

Section VI: Permit Shield

NO PERMIT SHIELD GRANTED

Section VII: Title V Requirements

The Administrator of the United States Environmental Protection Agency and the Commissioner of Environmental Protection have the authority to enforce the terms and conditions contained in these sections.

A. SUBMITTALS TO THE COMMISSIONER & ADMINISTRATOR

The date of submission to the Commissioner of any document required by this Title V Operating Permit shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Title V Operating Permit, including, but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is delivered or the date three days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in this Title V Operating Permit, the word "day" means calendar day. Any document or action which is required by this Title V Operating Permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.

Any document required to be submitted to the Commissioner under this Title V Operating Permit shall, unless otherwise specified in writing by the Commissioner, be directed to: Office of the Assistant Director; Compliance & Field Operations Division; Bureau of Air Management; Department of Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.

Any submittal to the Administrator of the U. S. Environmental Protection Agency shall be in a computer-readable format and addressed to: Director, Air Compliance Program; Attn: Air Compliance Clerk; Office of Environmental Stewardship; US EPA, Region 1; One Congress Street; Suite 1100 (SEA); Boston, MA 02114-2023.

B. CERTIFICATIONS [RCSA §22a-174-33(b)]

In accordance with Section 22a-174-33(b) of the RCSA, any report or other document required by this Title V permit and any other information submitted to the Commissioner or Administrator shall be signed by an individual described in Section 22a-174-2a(a) of the RCSA, or by a duly authorized representative of such individual. Any individual signing any document pursuant to Section 22a-174-33(b) of the RCSA shall examine and be familiar with the information submitted in the document and all attachments thereto, and shall make inquiry of those individuals responsible for obtaining the information to determine that the information is true, accurate, and complete, and shall also sign the following certification as provided in Section 22a-174-2a(a)(5) of the RCSA:

“I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes, under Section 53a-157b of the Connecticut General Statutes, and in accordance with any applicable statute.”

C. SIGNATORY RESPONSIBILITY [RCSA §22a-174-2a(a)]

If an authorization pursuant to Section 22a-174-2a(a) of the RCSA is no longer effective because a different individual or position has assumed the applicable responsibility, a new authorization satisfying the requirements of Section 22a-174-2a(a)(2) of the RCSA shall be submitted to the Commissioner prior to or together with the submission of any applications, reports, forms, compliance certifications, documents or other information which is signed by an individual or a duly authorized representative of such individual pursuant to Section 22a-174-2a(a)(2) of the RCSA.

Section VII: Title V Requirements

D. ADDITIONAL INFORMATION [RCSA §22a-174-33(j)(1)(X)]

The Permittee shall submit additional information in writing, at the Commissioner's request, within thirty (30) days of receipt of notice from the Commissioner or by such other date specified by the Commissioner, whichever is earlier, including information to determine whether cause exists for modifying, revoking, reopening, reissuing, or suspending the permit or to determine compliance with the permit.

In addition, within fifteen days of the date the Permittee becomes aware of a change in any information submitted to the Commissioner under this Title V Operating Permit or of any change in any information contained in the application, or that any such information was inaccurate or misleading or that any relevant information was omitted, the Permittee shall submit the changed, corrected, or omitted information to the Commissioner.

E. MONITORING REPORTS [RCSA §22a-174-33(o)(1)]

A Permittee, required to perform monitoring pursuant this Title V Operating Permit, shall submit to the Commissioner, on forms prescribed by the Commissioner, written monitoring reports on January 30 and July 30 of each year or on a more frequent schedule if specified in such permit. Such monitoring reports shall include the date and description of each deviation from a permit requirement including, but not limited to:

1. Each deviation caused by upset or control equipment deficiencies; and
2. Each deviation of a permit requirement that has been monitored by the monitoring systems required under this Title V Operating Permit, which has occurred since the date of the last monitoring report; and
3. Each deviation caused by a failure of the monitoring system to provide reliable data.

F. PREMISES RECORDS [RCSA §22a-174-33(o)(2)]

Unless otherwise required by this Title V Operating Permit, the Permittee shall make and keep records of all required monitoring data and supporting information for at least 5 years from the date such data and information were obtained. The Permittee shall make such records available for inspection at the site of the subject source, and shall submit such records to the Commissioner upon request. The following information, in addition to required monitoring data, shall be recorded for each permitted source:

1. The type of monitoring or records used to obtain such data, including record keeping;
2. The date, place, and time of sampling or measurement;
3. The name of the individual who performed the sampling or the measurement and the name of such individual's employer;
4. The date(s) on which analyses of such samples or measurements were performed;
5. The name and address of the entity that performed the analyses;
6. The analytical techniques or methods used for such analyses;
7. The results of such analyses;
8. The operating conditions at the subject source at the time of such sampling or measurement; and

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9. All calibration and maintenance records relating to the instrumentation used in such sampling or measurements, all original strip-chart recordings or computer printouts generated by continuous monitoring instrumentation, and copies of all reports required by the subject permit.

G. PROGRESS REPORTS [RCSA §22a-174-33(q)(1)]

The Permittee shall, on January 30 and July 30 of each year, or on a more frequent schedule if specified in this Title V Operating Permit, submit to the Commissioner a progress report on forms prescribed by the Commissioner, and certified in accordance with Section 22a-174-2a(a)(5) of the RCSA. Such report shall describe the Permittee's progress in achieving compliance under the compliance plan schedule contained in this Title V Operating Permit. Such progress report shall:

1. Identify those obligations under the compliance plan schedule in the permit which the Permittee has met, and the dates on which they were met; and
2. Identify those obligations under the compliance plan schedule in this Title V Operating Permit which the Permittee has not timely met, explain why they were not timely met, describe all measures taken or to be taken to meet them and identify the date by which the Permittee expects to meet them.

Any progress report prepared and submitted pursuant to Section 22a-174-33(q)(1) of the RCSA shall be simultaneously submitted by the Permittee to the Administrator.

H. COMPLIANCE CERTIFICATIONS [RCSA §22a-174-33(q)(2)]

The Permittee shall, on January 30 of each year, or on a more frequent schedule if specified in this Title V Operating Permit, submit to the Commissioner, a written compliance certification certified in accordance with Section 22a-174-2a(a)(5) of the RCSA and which includes the information identified in Title 40 CFR 70.6(c)(5)(iii)(A) to (C), inclusive.

Any compliance certification prepared and submitted pursuant to Section 22a-174-33(q)(2) of the RCSA shall be simultaneously submitted by the Permittee to the Administrator.

I. PERMIT DEVIATION NOTIFICATIONS [RCSA §22a-174-33(p)]

Notwithstanding Subsection D of Section VII of this Title V Operating Permit, the Permittee shall notify the Commissioner in writing, on forms prescribed by the Commissioner, of any deviation from an emissions limitation, and shall identify the cause or likely cause of such deviation, all corrective actions and preventive measures taken with respect thereto, and the dates of such actions and measures as follows:

1. For any hazardous air pollutant, no later than 24 hours after such deviation commenced; and
2. For any other regulated air pollutant, no later than 10 days after such deviation commenced.

J. PERMIT RENEWAL [RCSA §22a-174-33(j)(1)(B)]

All of the terms and conditions of this Title V Operating Permit shall remain in effect until the renewal permit is issued or denied provided that a timely renewal application is filed in accordance with Sections 22a-174-33(g), -33(h), and -33(i) of the RCSA.

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K. OPERATE IN COMPLIANCE [RCSA §22a-174-33(j)(1)(C)]

The Permittee shall operate the source in compliance with the terms of all applicable regulations, the terms of this Title V Operating Permit, and any other applicable provisions of law. In addition, any noncompliance constitutes a violation of the Clean Air Act and Chapter 446c of the Connecticut General Statutes and is grounds for federal and/or state enforcement action, permit termination, revocation and reissuance, or modification, and denial of a permit renewal application.

L. COMPLIANCE WITH PERMIT [RCSA §22a-174-33(j)(1)(G)]

This Title V Operating Permit shall not be deemed to:

1. preclude the creation or use of emission reduction credits or the trading of such credits in accordance with Sections 22a-174-33(j)(1)(I) and 22a-174-33(j)(1)(P) of the RCSA, provided that the Commissioner's prior written approval of the creation, use, or trading is obtained;
2. authorize emissions of an air pollutant so as to exceed levels prohibited under 40 CFR Part 72;
3. authorize the use of allowances pursuant to 40 CFR Parts 72 through 78, inclusive, as a defense to noncompliance with any other applicable requirement; or
4. impose limits on emissions from items or activities specified in Sections 22a-174-33(g)(3)(A) and (B) of the RCSA unless imposition of such limits is required by an applicable requirement.

M. INSPECTION TO DETERMINE COMPLIANCE [RCSA §22a-174-33(j)(1)(M)]

The Commissioner may, for the purpose of determining compliance with the permit and other applicable requirements, enter the premises at reasonable times to inspect any facilities, equipment, practices, or operations regulated or required under the permit; to sample or otherwise monitor substances or parameters; and to review and copy relevant records lawfully required to be maintained at such premises in accordance with this Title V Operating Permit. It shall be grounds for permit revocation should entry, inspection, sampling, or monitoring be denied or effectively denied, or if access to and the copying of relevant records is denied or effectively denied.

N. PERMIT AVAILABILITY

The Permittee shall have available at the facility at all times a copy of this Title V Operating Permit.

O. SEVERABILITY CLAUSE [RCSA §22a-174-33(j)(1)(R)]

The provisions of this Title V Operating Permit are severable. If any provision of this Title V Operating Permit or the application of any provision of this Title V Operating Permit to any circumstance is held invalid, the remainder of this Title V Operating Permit and the application of such provision to other circumstances shall not be affected.

P. NEED TO HALT OR REDUCE ACTIVITY [RCSA §22a-174-33(j)(1)(T)]

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Title V Operating Permit.

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Q. PERMIT REQUIREMENTS [RCSA §22a-174-33(j)(1)(V)]

The filing of an application or of a notification of planned changes or anticipated noncompliance does not stay the Permittee's obligation to comply with this Title V Operating Permit.

R. PROPERTY RIGHTS [RCSA §22a-174-33(j)(1)(W)]

This Title V Operating Permit does not convey any property rights or any exclusive privileges. This Title V Operating Permit is subject to, and in no way derogates from any present or future property rights or other rights or powers of the State of Connecticut, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or regulated activity affected thereby, including Section 4-181a(b) of the Connecticut General Statutes and Section 22a-3a-5(b) of the RCSA. This Title V Operating Permit shall neither create nor affect any rights of persons who are not parties to this Title V Operating Permit.

S. ALTERNATIVE OPERATING SCENARIO RECORDS [RCSA §22a-174-33(o)(3)]

The Permittee shall, contemporaneously with making a change authorized by this Title V Operating Permit from one alternative operating scenario to another, maintain a record at the premises indicating when changes are made from one operating scenario to another and shall maintain a record of the current alternative operating scenario.

T. OPERATIONAL FLEXIBILITY AND OFF-PERMIT CHANGES [RCSA §22a-174-33(r)(2)]

The Permittee may engage in any action allowed by the Administrator in accordance with 40 CFR 70.4(b)(12)(i) to (iii)(B) inclusive, and 40 CFR 70.4(b)(14)(i) to (iv), inclusive without a Title V non-minor permit modification, minor permit modification or revision and without requesting a Title V non-minor permit modification, minor permit modification or revision provided such action does not:

1. constitute a modification under 40 CFR 60, 61 or 63,
2. exceed emissions allowable under the subject permit,
3. constitute an action which would subject the Permittee to any standard or other requirement pursuant to 40 CFR 72 to 78, inclusive, or
4. constitute a non-minor permit modification pursuant to Section 22a-174-2a(d)(4) of the RCSA.

At least seven (7) days before initiating an action specified in Section 22a-174-33(r)(2)(A) of the RCSA, the Permittee shall notify the Administrator and the Commissioner in writing of such intended action.

U. INFORMATION FOR NOTIFICATION [RCSA §22a-174-33(r)(2)(A)]

Written notification required under Section 22a-174-33(r)(2)(A) of the RCSA shall include a description of each change to be made, the date on which such change will occur, any change in emissions that may occur as a result of such change, any Title V permit terms and conditions that may be affected by such change, and any applicable requirement that would apply as a result of such change. The Permittee shall thereafter maintain a copy of such notice with the Title V permit. The Commissioner and the Permittee shall each attach a copy of such notice to their copy of the permit.

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V. TRANSFERS [RCSA §22a-174-2a(g)]

No person other than the Permittee shall act or refrain from acting under the authority of this Title V Operating Permit unless this Title V Operating Permit has been transferred to another person in accordance with Section 22a-174-2a(g) of the RCSA.

The proposed transferor and transferee of a permit shall submit to the Commissioner a request for a permit transfer on a form provided by the Commissioner. A request for a permit transfer shall be accompanied by any fees required by any applicable provision of the general statutes or regulations adopted thereunder. The Commissioner may also require the proposed transferee to submit with any such request, the information identified in CGS Section 22a-6m.

W. REVOCATION [RCSA §22a-174-2a(h)]

The Commissioner may revoke this Title V Operating Permit on his own initiative or on the request of the Permittee or any other person, in accordance with Section 4-182(c) of the Connecticut General Statutes, Section 22a-3a-5(d) of the RCSA, and any other applicable law. Any such request shall be in writing and contain facts and reasons supporting the request. The Permittee requesting revocation of this Title V Operating Permit shall state the requested date of revocation and provide the Commissioner with satisfactory evidence that the emissions authorized by this Title V Operating Permit have been permanently eliminated.

Pursuant to the Clean Air Act, the Administrator has the power to revoke this Title V Operating Permit. Pursuant to the Clean Air Act, the Administrator also has the power to reissue this Title V Operating Permit if the Administrator has determined that the Commissioner failed to act in a timely manner on a permit renewal application.

This Title V Operating Permit may be modified, revoked, reopened, reissued, or suspended by the Commissioner, or the Administrator in accordance with Section 22a-174-33(r) of the RCSA, Connecticut General Statutes Section 22a-174c, or Section 22a-3a-5(d) of the RCSA.

X. REOPENING FOR CAUSE [RCSA §22a-174-33(s)]

This Title V Operating Permit may be reopened by the Commissioner, or the Administrator in accordance with Section 22a-174-33(s) of the RCSA.

Y. CREDIBLE EVIDENCE

Notwithstanding any other provision of this Title V Operating Permit, for the purpose of determining compliance or establishing whether a Permittee has violated or is in violation of any permit condition, nothing in this Title V Operating Permit shall preclude the use, including the exclusive use, of any credible evidence or information.